



Attorney Docket No.: 200313378-1

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Date of Deposit:	03/09/04	Name of Person Making the Deposit:	Desiree Caldwell	Signature of the Person Making the Deposit:	<i>Desiree Caldwell</i>
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Inventor(s): Sumit ROY, et al.

Serial No.: 10/698,606

Group Art Unit: 2661

Filed: 10/30/03

Examiner:

Confirm. No: 9857

Title: METHODS AND DEVICES FOR REDUCING TOTAL BANDWIDTH WHEN STREAMING MULTIPLE MEDIA STREAMS

Mail Stop Petition  
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PETITION TO SECURE FILING DATE AS OF MAILING DATE  
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PETITION

1. Applicant petitions that this application be accorded the filing date on which the papers were sent "Express Mail Post Office to Addressee" mailing label No. EV291785377US on 10/30/03. (Date)

SUBMISSIONS

2. Submitted herewith is:

☒ A copy of each page of the application showing the executed Express Mail certificate and mailing label number.

☒ A copy of the corresponding U.S. Post Office receipt establishing the deposit of the Express Mail on 10/30/03. (Date)

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☐ A copy of the cancelled checks referring to the new application identified above.

☐ A copy of the attorney's Deposit Account *Statement*, in which the items(s) corresponding to the deposit of the application referred to above is checked.

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☒ A copy of the Filing receipt received from the USPTO showing the incorrect Filing Date.

☒ A copy of the Application Transmittal showing the Certificate of Mailing executed on 10/30/03. (Date)

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3. The petition fee (37 C.F.R. 1.17(h)-\$130.00) is paid as follows:

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☒ Charge any additional fees required by this paper or credit any overpayment in the manner authorized above.

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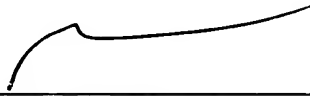
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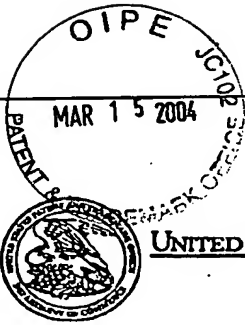
Please direct all correspondence concerning the above-identified application to the following address:

**HEWLETT-PACKARD COMPANY**  
Intellectual Property Administration  
P. O. Box 272400  
Fort Collins, Colorado 80527-2400

Respectfully submitted,

Date: 3/9/04

By:   
John P. Wagner, Jr.  
Reg. No. 35,398



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10/698,606	10/31/2003	2661	964	200313378-1	8	26	4

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Receipt is acknowledged of this regular Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Filing Receipt Corrections, facsimile number 703-746-9195. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

**Applicant(s)**

Sumit Roy, Menlo Park, CA; ✓  
Michele Covell, Palo Alto, CA; ✓  
Susie Wee, Palo Alto, CA; ✓

**Domestic Priority data as claimed by applicant****Foreign Applications****If Required, Foreign Filing License Granted: 02/03/2004****Projected Publication Date: 05/05/2005****Non-Publication Request: No****Early Publication Request: No****Title**

Methods and devices for reducing total bandwidth when streaming multiple media streams ✓

**Preliminary Class**

370

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Title 37, Code of Federal Regulations, 5.11 & 5.15**

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New Application Transmittal

Applicant: **ROY, et al.**

Filing Date: **10/30/03**

Docket No.: **HP-200313378-1**

Title: **METHODS AND DEVICES FOR REDUCING TOTAL BANDWIDTH  
WHEN STREAMING MULTIPLE MEDIA STREAMS**

Sir:

22141 U.S. PTO  
**10/698606**

Please acknowledge receipt of the following:

☒ Patent Application Transmittal

☒ Specification (No. pgs 15 including cover sheet)

☒ Claims (No. pgs 4) Abstract (No. pgs. 1)



☒ Drawings 4 Sheets

☒ Declaration/Power of Attorney

☐ Information Disclosure Statement

☐ PTO 1449

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☒ Deposit Account Authorization  
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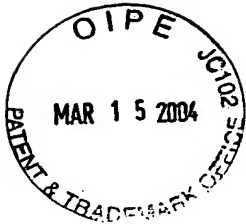
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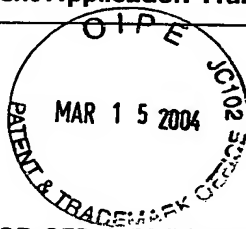
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IN THE U.S. PATENT AND TRADEMARK OFFICE  
Patent Application Transmittal Letter

Mail Stop Patent Application  
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Sir:

Transmitted herewith for filing under 37 CFR 1.53(b) is a(n): ☒ Utility ☐ Design

☒ original patent application,  
☐ continuation-in-part application

INVENTOR(S): Sumit ROY, et al.

TITLE: METHODS AND DEVICES FOR REDUCING TOTAL BANDWIDTH WHEN STREAMING  
MULTIPLE MEDIA STREAMS

Enclosed are:

- ☒ The Declaration and Power of Attorney. ☒ signed ☐ unsigned or partially signed  
☒ 4 sheets of drawings (one set) ☐ Associate Power of Attorney  
☐ Form PTO-1449 ☐ Information Disclosure Statement and Form PTO-1449  
☐ Priority document(s) ☐ (Other) (fee \$ )

CLAIMS AS FILED BY OTHER THAN A SMALL ENTITY				
(1) FOR	(2) NUMBER FILED	(3) NUMBER EXTRA	(4) RATE	(5) TOTALS
TOTAL CLAIMS	26 — 20	6	X \$18	\$ 108
INDEPENDENT CLAIMS	4 — 3	1	X \$86	\$ 86
ANY MULTIPLE DEPENDENT CLAIMS	0		\$290	\$ 0
BASIC FEE: Design ( \$340.00 ); Utility ( \$770.00 )				\$ 770
TOTAL FILING FEE				\$ 964
OTHER FEES				\$
TOTAL CHARGES TO DEPOSIT ACCOUNT				\$ 964

Charge \$ 964 to Deposit Account 08-2025. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Date of Deposit 10/30/03

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By Anthony Chou  
Typed Name: Anthony Chou

Respectfully submitted,

Sumit ROY, et al.

By John P. Wagner, Jr.

John P. Wagner, Jr.

Attorney/Agent for Applicant(s)  
Reg. No. 35,398

Date: 10/30/03

Telephone No.: (408) 938-9060



200313378-1

## METHODS AND DEVICES FOR REDUCING TOTAL BANDWIDTH WHEN STREAMING MULTIPLE MEDIA STREAMS

### TECHNICAL FIELD

5 Embodiments of the present invention pertain to streaming media.

### BACKGROUND ART

Television coverage of events, such as news or sporting events, typically uses multiple cameras. The event is captured live, and the  
10 audio/video content from each of the cameras is streamed back to a studio, for example. At the studio, the content is edited for broadcast. For example, an editor or producer can elect to broadcast the feed from one camera, then switch to the feed from another camera, and so on. This type of editing is typically performed whether the event is being broadcast live or being  
15 recorded for later broadcast.

The content received at the studio is preferably of high broadcast quality as this will provide the best viewing experience. As viewers move to high definition televisions that offer high resolutions and large picture screens,  
20 the desire for high broadcast-quality content increases.

The broadcast-quality content from each camera is transmitted via some type of communication network from the event to the studio. Typically, the content is transmitted via a wireless network such as a satellite network.  
25 Alternatively, the Internet can be used.

However, and especially when multiple cameras are being used, a substantial amount of network bandwidth is needed to transmit the content to the studio. If the available bandwidth is insufficient, then there can be delays  
30 in receiving the content, an unsatisfactory situation particularly for events being broadcast live.

Some conventional solutions address this problem by attempting to reserve a large amount of network bandwidth. However, reserving network  
35 bandwidth, especially in the amount needed, is expensive. Also, it may not be possible to reserve the bandwidth needed. For example, for breaking news events, it is not always possible to know in advance when and for long a large amount of bandwidth will be needed.